Volume 95 1979

Table of Contents

No. 1 1–214 issued on March 15, 1979
No. 2 215–432 issued on April 2, 1979
No. 3 433–640 issued on April 17, 1979

639 Corrections

1 *The Ninth Sir Hans Krebs Lecture*
Compartmentation and Communication in Living Systems. Ligand Conduction: a General Catalytic Principle in Chemical, Osmotic and Chemiosmotic Reaction Systems
P. Mitchell

Nucleic Acids, Protein Synthesis, and Molecular Genetics

31 The Effect of Dephosphorylation on the Properties of a Helix-Destabilizing Protein from Meiotic Cells and Its Partial Reversal by a Protein Kinase
Y. Hotta and H. Stern

99 Synthesis of Carbonic Anhydrase in Rabbit and Chicken Reticulocyte Lysates
F. Cramer, H. Gould, S. Barlow, and N. Carter

203 Globin mRNA Precursor. Cross-Linking *in situ* of Double-Stranded Segments with Aminomethyltrioxalen
A. M. Agliano, A. Nacci, C. Reymond, D. Appleby, and G. Spohr

235 Hepatocyte Chromosomal Non-histone Proteins in Developing Rats
C. Guguen-Guillouzo, L. Tichonicky, and J. Kruh

295 Enzymic Synthesis, Characterisation and Nuclear-Magnetic-Resonance Spectra of pppA2′p5′A2′p5′A and Related Oligonucleotides: Comparison with Chemically Synthesised Material
E. M. Martin, N. J. M. Birdsall, R. E. Brown, and I. M. Kerr

341 Reversible Inactivation of tRNA Nucleotidyltransferase from Baker's Yeast by $tRNA^{Phe}$ Containing Iodoacetamide-Alkylated 2-Thiocytidine in Normal and Additional Positions
M. Kröger, H. Sternbach, and F. Cramer

349 Ribosomal Phosphoproteins of Mouse Myeloma Cells. Changes in the Degree of Phosphorylation Induced by Hypertonic Initiation Block
O. H. W. Martini and J. Kruppa

359 Protein S1 from *Escherichia coli* Ribosomes: An Improved Isolation Procedure and Shape Determination by Small-Angle X-Ray Scattering
H. Labischinski and A.-R. Subramanian

377 Effects of Cytosol on Transcription in Isolated Simian-Virus-40-Infected Nuclei
I. Icekson and M. Yaniv

391 Construction *in vitro* of Hybrid Plasmids Carrying All the *Eco*RI Fragments from $\lambda rif^{d}18$ DNA
A. Bernardi and F. Bernardi

527 β-Like Globin RNA Sequences in Hemoglobin Lepore Disease
B. Giglioni, P. Comi, R. Taramelli, M. Pozzoli, A. Zanollo, S. Ottolenghi, and A. M. Gianni

593 Rearrangements in the Course of Ribonuclease Hydrolysis of Pre-messenger Ribonucleoproteins. A Warning
J. Stévenin, R. Gattoni, G. Divilliers, and M. Jacob

Protein Chemistry and Structure

21 Intrinsic Fluorescence of Cowpea-Chlorotic-Mottle-Virus Protein
J. Krüse, B. J. M. Verduin, and A. J. W. G. Visser

39 Degradation of the DNA-Binding Domain of Wild-Type and i^{-d} *lac* Repressors in *Escherichia coli*
M. Schlotmann and K. Beyreuther

193 The Complete Amino-Acid Sequence of a Trout-Testis Non-histone Protein, H6, Localized in a Subset of Nucleosomes and Its Similarity to Calf-Thymus Non-histone Proteins HMG-14 and HMG-17
D. C. Watson, N. C. W. Wong, and G. H. Dixon

227 Colivirus-T3-Coded *S*-Adenosylmethionine Hydrolase
N. Spoerel and P. Herrlich

239 The Influence of Localized Chemical Modifications of the Basic Pancreatic Trypsin Inhibitor on Static and Dynamic Aspects of the Molecular Conformation in Solution
G. Wagner, H. Tschesche, and K. Wüthrich

249 Conformational Studies by ^{1}H Nuclear Magnetic Resonance of the Basic Pancreatic Trypsin Inhibitor after Reduction of the Disulfide Bond between Cys-14 and Cys-38. Influence of Charged Protecting Groups on the Stability of the Protein
G. Wagner, A. J. Kalb (Gilboa), and K. Wüthrich

255 Characterization of Pepsin Fragments of Basement Membrane Collagen Obtained from a Mouse Tumor
R. Timpl, P. Bruckner, and P. Fietzek

327 The Reaction of Nitrogen Monoxide and of Nitrite with Deoxyhaemocyanin and Methaemocyanin of *Helix pomatia*
J. Verplaetse, P. van Tornout, G. Defreyn, R. Witters, and R. Lontie

383 Isolation and Characterization of a Native Placental Basement-Membrane Collagen and Its Component α Chains
R. W. Glanville, A. Rauter, and P. P. Fietzek

399 Dissociation and Reassembly of *Limulus polyphemus* Hemocyanin
M. M. C. Bijlholt, E. F. J. van Bruggen, and J. Bonaventura

509 Characterization of the Isoenzymes of Pig-Liver Esterase. 1. Chemical Studies
E. Heymann and W. Junge

543 Actin in Mammalian Lens
M. A. Kibbelaar, A.-M. E. Selten-Versteegen, I. Dunia, E. L. Benedetti, and H. Bloemendal

561 The Molecular Size and Shape of the Folch-Pi Apoprotein in Aqueous and Organic Solvents
F. Lavialle, B. de Foresta, M. Vacher, C. Nicot, and A. Alfsen

Enzymology

115 A Method for Designing Peptide Substrates for Proteases. Tripeptidyl-*p*-nitroanilide Substrates for Subtilisin Carlsberg
M. Pozsgay, R. Gáspár, S. Bajusz, and P. Elődi

167 (Photo)chemistry of 5-Deazaflavin. A Clue to the Mechanism of Flavin-Dependent (De)hydrogenation
H.-J. Duchstein, H. Fenner, P. Hemmerich, and W.-R. Knappe

183 5-Thia-5-Deazaflavin, a $1e^-$-Transferring Flavin Analog
H. Fenner, R. Grauert, P. Hemmerich, H. Michel, and V. Massey

459 Cathepsin D of Rat Spleen. Affinity Purification and Properties of Two Types of Cathepsin D
K. Yamamoto, N. Katsuda, M. Himeno, and K. Kato

519 Characterization of the Isoenzymes of Pig-Liver Esterase. 2. Kinetic Studies
W. Junge and E. Heymann

569 Inactivation and Disassembly of the Pyruvate Dehydrogenase Multienzyme Complex from Bovine Kidney by Limited Proteolysis with an Enzyme from Rat Liver
G.-B. Kresze and L. Steber

Carbohydrates, Lipids and Other Natural Products

449 Lipid Phase Transitions and Procoagulant Activity
G. Tans, H. van Zutphen, P. Comfurius, H. C. Hemker, and R. F. A. Zwaal

497 Fatty-Acid Synthesis in Lactating-Goat Mammary Gland. 1. Medium-Chain Fatty-Acid Synthesis
I. Grunnet and J. Knudsen

503 Fatty-Acid Synthesis in Lactating-Goat Mammary Gland. 2. Medium-Chain Fatty Acid Synthesis
I. Grunnet and J. Knudsen

639 Structure of the Disaccharide Chain of Galactosyl-*N*-acetylgalactosaminyl-protein Synthesized *in vitro*
D. H. van den Eijnden, R. A. Barneveld, and W. E. C. M. Schiphorst

Physical Biochemistry

107 Energetics of the Thermal Transitions of RNA 1 and RNA 4 of Alfalfa-Mosaic Virus in the Presence and Absence of Coat Protein
H.-J. Hinz, S. Srinivasan, and E. M. J. Jaspars

121 Protein – Non-ionic Detergent Interaction. Interaction of Bovine Serum Albumin with Alkyl Glucosides Studied by Equilibrium Dialysis and Infrared Spectroscopy
Z. Wasylewski and A. Kozik

147 On the Secondary and Tertiary Structure of Murein. Low and Medium-Angle X-Ray Evidence against Chitin-Based Conformations of Bacterial Peptidoglycan
H. Labischinski, G. Barnickel, H. Bradaczek, and P. Giesbrecht

157 Conformational Energy Calculation on the Peptide Part of Murein
G. Barnickel, H. Labischinski, H. Bradaczek, and P. Giesbrecht

323 Cooperative Binding of α Subunits to the Apo-β_2 Subunit of Tryptophan Synthase from *Escherichia coli*
P. Bartholmes and B. Teuscher

367 270-MHz ^{1}H Nuclear-Magnetic-Resonance Study of Met-enkephalin in Water. Conformational Behaviour as a Function of pH
L. Zetta, F. Cabassi, R. Tomatis, and M. Guarneri

621 On the Nature of Biochemically Generated Hydroxyl Radicals. Studies using the Bleaching of *p*-Nitrosodimethylaniline as a Direct Assay Method
W. Bors, C. Michel, and M. Saran

Membranes and Bioenergetics

61 Respiratory Nitrate Reductase: Its Localization in the Cytoplasmic Membrane of *Klebsiella aerogenes* and *Bacillus licheniformis*
F. B. Wientjes, A. H. J. Kolk, N. Nanninga, and J. van 'T Riet

77 Effects of Phospholipase A_2 and Albumin on the Calcium-Dependent ATPase and the Lipid Composition of Sarcoplasmic Membranes
G. Swoboda, J. Fritzsche, and W. Hasselbach

275 Suppression of Thermotropic Lipid Clustering in *Tetrahymena* Nuclear Membranes upon Ca^{2+}/Mg^{2+}-Induced Membrane Contraction
G. Giese, I. Fromme, and F. Wunderlich

309 Formate-Nitrite Reduction in *Escherichia coli* K12. 1. Physiological Study of the System
A. Abou-Jaoudé, M. Chippaux, and M.-C. Pascal

315 Formate-Nitrite Reduction in *Escherichia coli* K12. 2. Identification of Components Involved in the Electron Transfer
A. Abou-Jaoudé, M.-C. Pascal, and M. Chippaux

427 Light-Induced Proton Transport by Chloroplasts Suspended in Fluid Media at Sub-Zero Temperatures: Kinetics and Stoichiometry
L. F. Olsen and R. P. Cox

433 Characterization of Porins from the Outer Membrane of *Salmonella typhimurium*. 1. Chemical Analysis
H. Tokunaga, M. Tokunaga, and T. Nakae

441 Characterization of Porins from the Outer Membrane of *Salmonella typhimurium*. 2. Physical Properties of the Functional Oligomeric Aggregates
M. Tokunaga, H. Tokunaga, Y. Okajima, and T. Nakae

579 Optical Probe Responses on Sarcoplasmic Reticulum: Oxacarbocyanines as Probes of Membrane Potential
T. Beeler, J. T. Russell, and A. Martonosi

613 Localization of Phospholipids in the Membrane of *Bacillus megaterium*
E. J. F. Demant, J. A. F. OP den Kamp, and L. L. M. van Deenen

Cellular Biochemistry and Metabolism

51 Expression of External-Surface Membrane Proteins in Differentiated and Undifferentiated Mouse Neuroblastoma Cells
N. Zisapel and U. Z. Littauer

69 Induction of the Phospho*enol*pyruvate: Hexose Phosphotransferase System Associated with Relative Anaerobiosis in an Obligate Aerobe
N. Pelliccione, B. Jaffin, M. E. Sobel, and T. A. Krulwich

89 Dual Localization of Long-Chain Acyl-CoA Hydrolase in Rat Liver: One in the Microsomes and One in the Mitochondrial Matrix
R. K. Berge and M. Farstad

127 Factors Influencing the Response of Human Blood Platelets to Analogues of ADP Which May Act as Partial Agonists at the ADP Receptor
C. M. Egan, A. P. Fisher, and M. C. Scrutton

139 Norepinephrine-Stimulated Fatty-Acid Release and Oxygen Consumption in Isolated Hamster Brown-Fat Cells. Influence of Buffers, Albumin, Insulin and Mitochondrial Inhibitors
J. Nedergaard and O. Lindberg

215 Inhibition of the Lysosomal Pathway of Protein Degradation in Isolated Rat Hepatocytes by Ammonia, Methylamine, Chloroquine and Leupeptin
P. O. Seglen, B. Grinde, and A. E. Solheim

287 Demonstration by Membrane Reconstitution of a Butanol-Soluble Intermediate in the Biosynthesis of the O9 Antigen of *Escherichia coli*
S. Kanegasaki and K. Jann

333 A Kinetic Analysis of the Uptake of Cytosine-β-D-Arabinoside by Rat-B77 Cells. Differentiation between Transport and Phosphorylation
R. Koren, E. Shohami, and S. Yeroushalmi

469 Purification and Partial Characterization of *a* Factor, a Mating Hormone Produced by Mating-Type-*a* Cells from *Saccharomyces cerevisiae*
R. Betz and W. Duntze

477 Regulation of Glycogen Synthase Activity in Choriocarcinoma Cells. Effect of Glucose Starvation on the Conversion of Synthase D to Synthase I and the Kinetic Properties of the Enzyme
K.-P. Huang

487 Modification of Peptidoglycan Structure by Penicillin Action in Cell Walls of *Proteus mirabilis*
H. H. Martin and J. Gmeiner

533 Cholesterol 7α-Hydroxylase in Isolated Rat Liver Cells
K. M. Botham and G. S. Boyd

551 The 'Enzyme-Probe' Method for Characterizing Metabolite Pools. The Use of NAD-Glycohydrolase in Human Erythrocyte Sonicate as a Model System
M. Solti and P. Friedrich

607 Involvement of Calcium in the Inhibition by Insulin of the Glucagon-Stimulated Adenylate-Cyclase Activity
Z. Kiss

Developmental Biochemistry and Immunology

265 Similarities between Immunoglobulins and Transplantation Antigens in Amino-Acid Sequence and Disulfide-Bond Distribution
K. Wiman, L. Trägårdh, L. Rask, and P. A. Peterson

407 Biochemical and Genetic Evidence for Two Extracellular Adenosine 3′:5′-Monophosphate Phosphodiesterases in *Dictyostelium purpureum*
A. S. Tsang and M. B. Coukell

419 Direct Evidence for Extracellular Adenosine 3′:5′-Monophosphate Phosphodiesterase Induction and Phosphodiesterase Inhibitor Repression by Exogenous Adenosine 3′:5′-Monophosphate in *Dictyostelium purpureum*
A. S. Tsang and M. B. Coukell

Indexed in Current Contents